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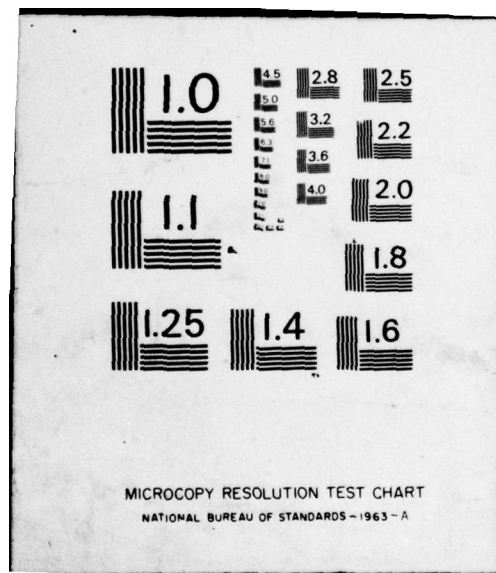
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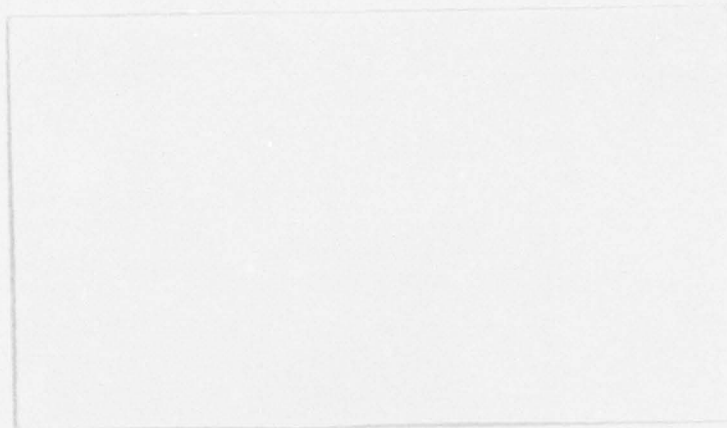
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**DAISY/APL Interface User's Memo**

**E. G. Hurst  
H. L. Morgan  
D. N. Ness  
R. J. Zowader**

**Decision Sciences Department**

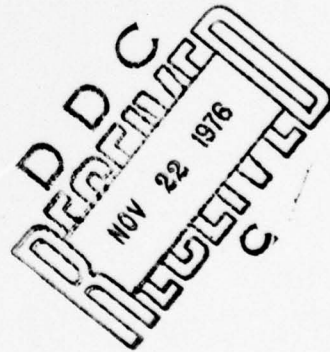
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## Introduction

This memo describes the use of the DAISY/APL Interface, and the functions currently implemented under APL which may be of interest to the DAISY user. The reader is assumed to be familiar with the DAISY User's Memo (1V). It should be noted that when the user is in the DAISY/APL environment, the spelling correction features of DAISY will not be present.

## TOAPL Command

The DAISY user can enter APL mode by typing the DAISY command

TOAPL terminal

where the terminal parameter must be one of tty, t2741, t4013, or bit. This indicates the type of terminal which the user is operating. The system will then pass this information along with the user's name to APL. The response will be

DAISY/APL INTERFACE SAVED date time

followed either by the loading of the user's workspace, or the message indicating that such a workspace is being created. At

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this point the user has available all of the functions to be described below, along with the full power of apl. The user should be careful when using or copying workspaces, and should save his workspace only with the DSAVE command described below.

#### DAISY Command

To return from APL back to the main command interpreter, the APL function

DAISY

is typed. This closes files, etc., and returns control to DAISY.

#### DAISYWORK Command

The command DAISYWORK is available for creating lines which are to be processed by the main DAISY command system when control returns there. For example, the user might wish to trigger a decision in the DAISY system, based on the action of some APL function. The syntax is:

DAISYWORK string

which adds the command "string" to the file of work being built for execution by DAISY. When the next DAISY command is given, this file will be processed before any additional commands are accepted from the console. For example "DAISYWORK 'TRIGGER 103'" followed by "DAISY" will cause the command

#trigger 103" to be executed as soon as DAISY is reentered.

Rather than using the standard APL )SAVE command to save any data or functions the user has placed in his/her workspace, the command

#### DASAVE

must be used. This function will clean out the interface and other standard functions before saving the workspace, and will copy them back after the saving has taken place.

#### Submarine Data Functions

there are currently five functions implemented which are used to read in the data on submarines and submarine classes prepared for the project. (These data are also available on the 370/168 in either ASAP or REL form). The function:

#### GETSUBDATA

is used to open the two files for input. File 1 contains the information on submarine classes, and file 2 has the information on individual submarines. The function :

#### READAS n

where n is 1 or 2, reads the next record from the specified file. When through with the data, the function :

#### CLOSESUBDATA

will close and deassign the files for later use. It should be

noted that if a DASAVE command is given when the files are open, the file assignment information is also saved, and further opens are not necessary.

There are four additional functions implemented which are used to find data about an individual submarine or class of submarines. The Function:

CLASSREC string

locates the class record identified by its class name, which is given in the string. The function:

CLASS string

uses CLASSREC to locate the class record indicated by its class name. All relevant data about the class is returned. The function:

SUBREC string

locates the submarine record identified by its pennant, which is given in the string. The function:

PENNANT string

uses SUBREC to locate the appropriate submarine record, where string is the pennant, and returns all data in the record. For example;

PENNANT 's 501' would return THE NAME OF SUB IS GIADA OWNED BY ITALY CLASS ACCIAIO COMPLETED 1941bsect <Data Item Functions>

There are three functions which allow the user to locate, display and set the values of individual data items.

#### LOCATE function

string1 LOCATE string2

where string1 is a data item number given as 'DATA 302' and string2 is an item name such as 'TORPEDOES', verifies that both exist and returns the location of the value. If the given item name (in this case TORPEDOES) is not found in the file, you will be asked if you would like it added or not. If so, the file will be expanded and initialized to 0's for this item.

#### DISPLAY function

string1 DISPLAY string2

displays the value of the data item identified. string1 and string2 are as in the LOCATE function.

#### SET function

tring1 SET string2 locates the data item value identified by string1 and string2 and then requests numeric input which is then set as the value of the data item.

## Plotting Functions

There are currently three functions which are available if the user has a Tektronix 4013 storage tube terminal or equivalent. These are used to provide line drawings which may be of assistance to the decision maker.

### COORD Function

coord r uses the per hour speed of the submarine to calculate the points of a circle of radius R and of radius 2R. It puts these points in the proper order to plot the one and two hour circles of action of the submarine.

### SUBAREA Function

sublocation SUBAREA R uses sublocation, a numeric vector of length two, and the per hour speed of the submarine, R, to plot the submarine's position and circles of action relative to US.

### CLSLOT Function

sublocation CLSPLOT class uses the submarine's class name to find its speed and then uses SUBAREA to do the plotting. Thus, if you assume that we are at location 0,0 and a submarine with a particular pennant has been spotted at location x,y, the CLSPLOT function is all that is needed to plot our position

relative to the one and two hour circles of action of the opposing sub.

#### PENLOT Function

sublocation PENLOT pennant, uses the submarine's pennant to find its class name and then calls CLSLOT to find the sub's speed and plot the one and two hour circles of action.

#### APL

The user should realize that the entire power of APL is always available when using the DAISY/APL interface. Thus, a trained user could define new functions, perform complex side calculations, etc.

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Assistant Director  
Plans and Appraisals Division  
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Dr. C. Peterson  
Decisions and Designs, Inc.  
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7900 Westpark Drive  
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Menlo Park, CA 94025

Dr. Howard L. Morgan  
Wharton School  
University of Pennsylvania  
Philadelphia, PA 19174

